

MITZI ASSEMBLY

SECTIONS

HEAD ASSEMBLY

CHEST ASSEMBLY

RIGHT ARM ASSEMBLY

LEFT ARM ASSEMBLY

LEG ASSEMBLY

AIR SUPPLY SYSTEM

COSTUMES & FIBERGLASS

MITZI HEAD ASSEMBLY			
HEAD FRAME		EYES LEFT/RIGHT CYLINDER ASSEMBLY	
10. Head frame w/bearings	M11440	36. Cylinder only	28-005-010
11. Needle bearing only	B56	37. Barb with O-ring	1000
12. Bushing only		38. Clevis (front)	28-040-005
13. Bushing only (old style)	FB56-3	39. Clevis (rear)	28-040-010
13. Bushing only (eye pivot)	B56-4	40. Gasket (fiber style)	2400
EAR ASSEMBLY		ASSEMBLY HARDWARE	
14. Ear lever w/bushing	M11381	HARDWARE (attach cylinder to eye linkage & rear mount)	
15. Bushing only (ear lever)	B46-2	41. Cotter pin	28-045-957
16. FAS-PIN (ear lever to ear body)	28-055-172	EYELID ASSEMBLY	
17. Set screw 8-32 x 1/4"	28-090-302	42. Eyelid	M13555
18. Ear cyl. rear mount	M07010	43. FAS-PIN (eyelid cyl. front mount)	28-055-170
19. Hardware (ear cylinder rear mount to body)	28-090-341	44. Shaft collar (rear mount)	28-070-015
8-32x1" cap screw		45. Cyl. rear mount pin (7 1/2" dowel pin)	28-055-081
8-32 nut		EYELID CYLINDER ASSEMBLY	
#8 flatwasher		46. Cylinder only	D31801-A
#8 lockwasher		47. Rebuild kit (Chicago cylinder)	28-012-035
EAR CYLINDER ASSEMBLY		48. Fitting	85-030-110
20. Cylinder only	28-005-010	49. Barb with O-ring	1000
21. Barb with O-ring	1000	50. Gasket (fiber style)	2400
22. Clevis (front)	28-040-005	51. Jam nut	28-040-215
23. Clevis (rear)	28-040-010	52. Clevis	28-040-015
24. Gasket (fiber style)	2400	53. Bushing (cyl. rear)	B46-2
ASSEMBLY HARDWARE		MOUTH ASSEMBLY	
HARDWARE (attach ear cylinder to ear lever & rear mount)		54. Mouth lever w/bushing	M11210
25. Cotter pin	28-045-957	55. Bushing only (mouth pivot)	FB56-3
EYE ASSEMBLY		56. Bushing only (mouth lever)	B46-2
26. Eyeball	M11250	57. Bronze washer	28-085-025
27. Bronze washer	28-085-025	58. Dowel pin (mouth pivot)	28-055-100
28. Shaft collar	28-070-025	59. Set screw 8-32 x 1/4"	28-090-302
EYE LINKAGE ASSEMBLY		60. FAS-PIN (cyl. front and rear mount)	28-055-170
29. Right eye act. lever	M07100	61. Mouth cyl. rear mount	M07230
30. Left eye act. lever	M11270	62. Hardware (cyl. rear mount to head frame)	28-090-304
31. Mule bar (eye link. bar)	M07180	1/4-20x3/4" bolt	
32. Shaft collar	28-070-010	1/4-20 nut	
33. Dowel pin	28-055-025	1/4 flatwasher	
34. Eye cyl. rear mount	M07150	1/4 lockwasher	
35. Hardware (eye cyl. rear mount to head frame)	28-090-342		
10-32x3/4" cap screw			
10-32 nut			
#10 lockwasher			
#10 flatwasher			

MOUTH CYLINDER ASSEMBLY

63.Cylinder only	D31801-A
64.Rebuild kit (Chicago cylinder)	28-012-035
65.Fitting	85-030-110
66.Barb with O-ring	1503
67.Gasket (fiber style)	2400
68.Jam nut	28-040-215
69.Clevis	28-040-015
70.Bushing (cylinder rear)	B46-2

E-HINGE ASSEMBLY

71.E-hinge with bearings	M09442
72.Needle bearing only	B56
73.Dowel pin (E-hinge)	28-055-130
74.Retraining clip	28-055-205
75.Load washer	28-085-125

ASSEMBLY HARDWARE

76.Hardware (attach head to chest)	28-090-305
5/16-18 x 1" bolt	
5/16 lockwasher	

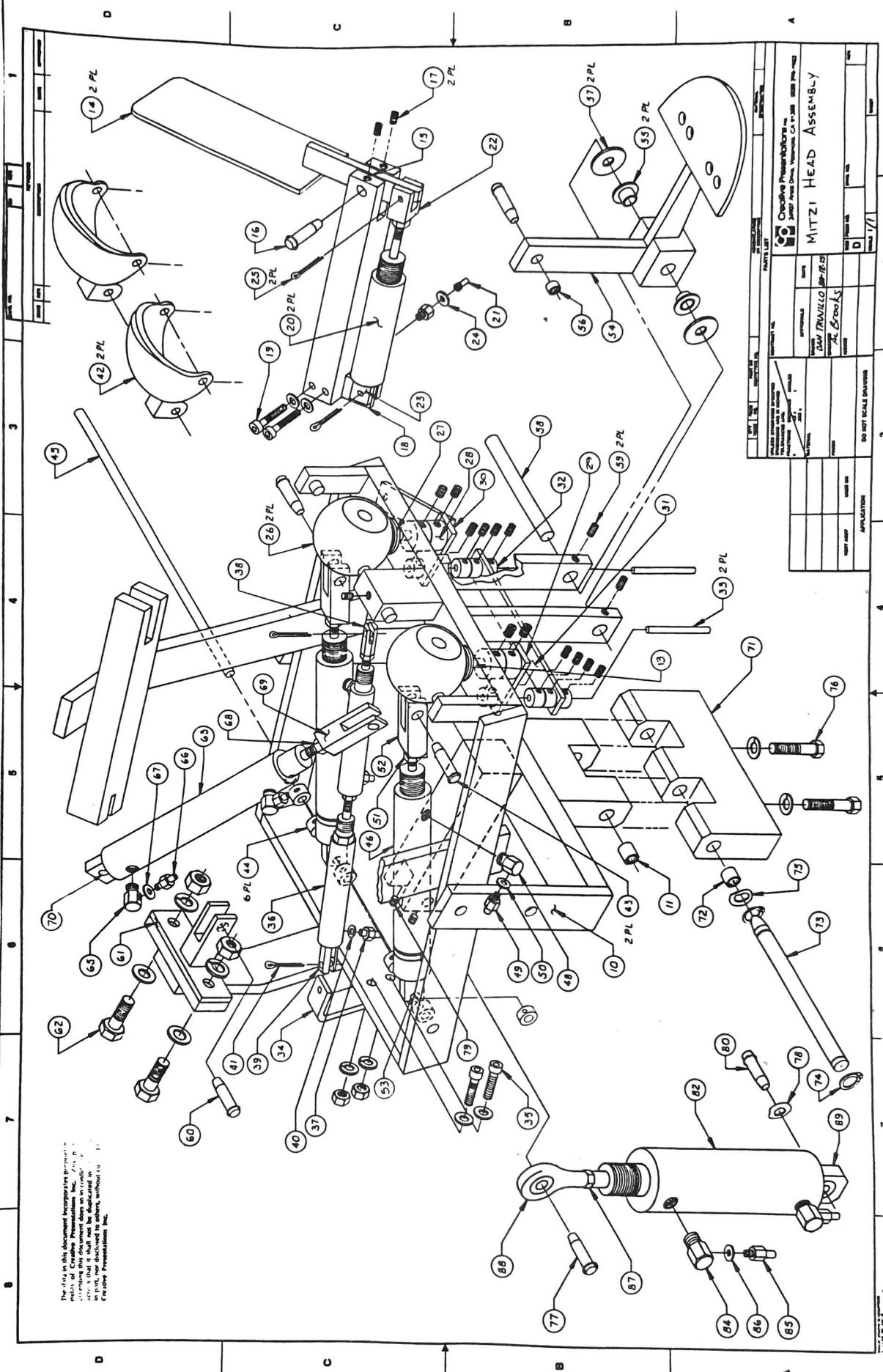
HEAD UP/DOWN MOUNT ASSEMBLY

77.FAS-PIN (front cylinder mount)	28-055-178
78.Load washer	28-085-125
79.Set screw 8-32 x 1/4"	28-090-302
80.FAS-PIN (rear cylinder mount)	28-055-178

HEAD UP/DOWN CYLINDER ASSEMBLY

81.Rebuild kit (brass cylinder)	28-010-210
82.Cylinder only	D31796-A
83.Rebuild kit (Chicago cylinder)	28-012-040
84.Fitting	85-030-110
85.Barb with O-ring	1000
86.Gasket (fiber style)	2400
87.Jam nut	28-040-225
88.Rod end	M19800
89.Bushing (cylinder only)	B58-3

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MITZI CHEST ASSEMBLY

<u>CHEST ASSEMBLY</u>	
10. Chest with bearings	M17985
11. Needle bearing only	B56
12. Bushing only (old	
chest pivot)	
13. Bushing only	FB56-3
14. Bushing only	B56-8
(lower neck)	B56-7
<u>UPPER NECK SHAFT ASSEMBLY</u>	
15. Shaft with bearing	
(lower neck)	
16. Bearing only	M11490
17. Bushing only	B45
18. Shaft collar	B56-8
(lower neck)	28-070-045
19. Delrin neck spacer	M06743
20. Rear mount block (head	
up/down cylinder)	
21. Cap screws	M10020
22. Set screw 8-32 x 1/4"	28-045-970
23. Actuation lever	28-090-302
(head left/right)	M07420
24. Set screw	28-090-306
25. Roll pin (old style)	28-060-045
26. FAS-PIN (act. lever)	28-055-186
27. Bronze washer	28-085-025
28. Split shaft pin	
(with bushing)	28-055-125
29. Split shaft pin	
(with bearings)	28-055-200
29.5. Dowel pin	28-055-100

COLLAR PINS

30. Collar pin(left/right
 arm raise rear mount) 28-050-060
31. Collar pin (head left/
 right cyl.rear mount) 28-050-013
32. Shaft collar(head left/
 right cyl.rear mount) 28-070-029
33. Hardware (collar pin) 28-090-308
 3/8-24 nut
 3/8 lockwasher

HEAD LEFT/RIGHT CYLINDER ASSEMBLY

34.Cylinder only	28-015-037
35.Cylinder rebuild kit	28-015-214
36.Fitting	85-030-110
37.Barb with O-ring	1000
38.Gasket (fiber style)	2400
39.Bushing only (rear mnt. block old style)*	B68-6
40.Spherical bearing	
	rear mount 28-015-280
41.Jam nut	28-040-227
42.Rod end	TRE-5

LOWER NECK SHAFT ASSEMBLY

43. Shaft with bearing
(lower neck) M11530
 44. Bushing only
(old style) B56-8
 45. Bearing only
(new style) B45

BODY LEAN ASSEMBLY

46. Body lean lever
with bushing M08680

47. Bushing only (body
lean actuation lever) B68-4

48. Hardware (body lean act.
lever to chest frame) 28-090-307
5/16-18x2" bolt
5/16-18 nut
5/16 flatwasher
5/16 lockwasher

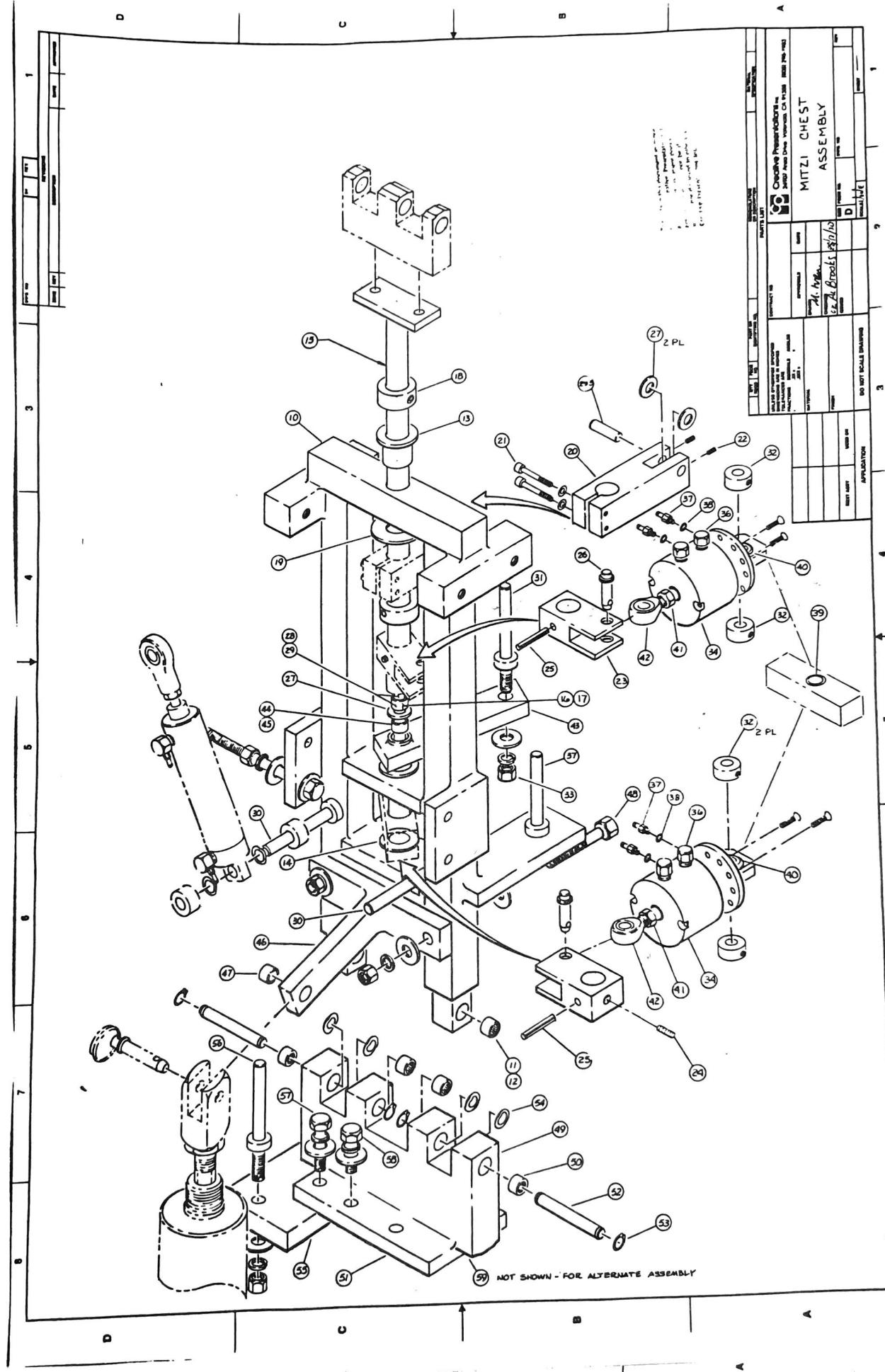
* Replaces old-style block.

<u>PELVIS PLATE ASSEMBLY</u>		
49. Double C-hinge with bearing *		M09605
50. Needle bearing only		B56
51. Pelvis plate base *		M08350
52. Dowel pin (C-hinge pin)		28-055-120
53. Retaining clip		28-055-205
54. Load washer		28-085-125
55. Body turn front mount plate only		M10990
56. Collar pin only (body turn front mount)		28-050-075
57. Hardware (body turn to pelvis plate)		28-090-343
5/16-24x1 1/2" bolt		
5/16-24	nut	
5/16	flatwasher	
5/16	lockwasher	
58. Hardware (attach pelvis plate to leg assembly)		28-090-344
5/16-18x1" bolt		
5/16	lockwasher	
5/16	flatwasher	
59. Hardware (attach double C-hinge to pelvis plate base)		28-045-969
Tapered flat head cap screw *		

* If you have a welded pelvis plate
then you must order the following
parts to get an entire pelvis
plate assembly:

1 - M09605
1 - M08350
4 - 28-045-969

Individual parts may be ordered
if you have an assembled plate.



MITZI RIGHT ARM ASSEMBLY

RIGHT SHOULDER ASSEMBLY

10. Small K-hinge with bearings M18060

11. Bushing only (old style) FB56-3

12. Needle bearing only B56

13. Collar pin (cylinder rear mount pin) 28-050-025

14. Collar pin (arm raise pin) 28-050-015

15. Hardware (collar pin) 28-090-308
 3/8-24 nut
 3/8 lockwasher

16. Shaft collar (cylinder rear mount pin) 28-070-029

17. Shoulder shaft block with bushing M09870

18. Bushing only (shoulder shaft block) FB810-4

19. Hardware (shoulder shaft block to K-hinge) 28-090-310
 1/4-20x2 1/2" bolt
 1/4-20 nut
 1/4 flatwasher
 1/4 lockwasher

20. Shoulder shaft (small shoulder) M11800

21. Actuation lever (small shoulder) M07380

22. Set screw 8-32 x 1/4" 28-090-302

23. Hardware (small shoulder) 28-045-972
 Cap screw
 #10 lockwasher

24. Dowel pin (cyl. front mount) 28-055-087

25. Roll pin (to pin act. lever) 28-060-045

ASSEMBLY HARDWARE

26. Hardware (attach right arm to chest) 28-090-309
 5/16-18x1 1/2" bolt
 5/16 lockwasher

MITZI UPPER RIGHT ARM ASSEMBLY

27. Upper right arm with bearings M12035

28. Needle bearing only B56

29. Hardware (attach upper arm to shoulder) 28-090-345
 1/4-20x1 1/4" bolt
 1/4-20 nut
 1/4 flatwasher
 1/4 lockwasher

MITZI LOWER RIGHT ARM ASSEMBLY

30. Lower right arm with bearings M12050

31. Lower arm pivot bushing (old) FB56-3

32. Lower arm lever bushing 28-032-035

33. Needle bearing only (arm pivot) B56

E-HINGE ASSEMBLY

34. E-hinge w/bearings M09442

35. Needle bearing only B56

36. E-hinge pin (dowel pin) 28-055-130

37. Load washer 28-085-125

38. Retaining clip 28-055-205

SHOULDER CYLINDER ASSEMBLY

39. Cylinder only 28-015-040

40. Rebuild kit 28-015-214

41. Fitting 85-030-110

42. Barb with O-ring 1000

43. Gasket (fiber style) 2400

44. Jam nut 28-040-227

45. Rod end TRE-5

46. Bushing for rear mount block B68-4

47. Spherical bearing for rear mount 28-015-280

ASSEMBLY HARDWARE

HARDWARE (attach upper arm to lower arm)

48. Dowel pin 28-055-180

49. Retaining clip 28-055-205

50. Load washer 28-085-125

RIGHT ELBOW CYLINDER ASSEMBLY

51. Rebuild kit (brass cylinder) 28-010-210
52. Cylinder only D31796-A
53. Rebuild kit (Chicago cylinder) 28-012-040
54. Fitting 85-030-110
55. Barb with O-ring 1001
56. Gasket (fiber style) 2400
57. Jam nut 28-040-225
58. Clevis 28-040-025
59. Bushing (cyl. rear) B58-3

ASSEMBLY HARDWARE

HARDWARE (attach cylinder to upper and lower arm)

60. FAS-PIN (upper arm) 28-055-176
61. Set screw 8-32 x 1/4" long 28-090-302
62. FAS-PIN (lower arm) 28-055-178

RIGHT ARM RAISE CYLINDER ASSEMBLY

D31794-A
63. Cylinder only
64. Rebuild kit (Chicago cylinder) 28-012-040
85-030-110
65. Fitting 1001
66. Barb with O-ring 2400
67. Gasket (fiber style) 28-040-225
68. Jam nut M19810
69. Rod end B68-3
70. Bushing (cyl. rear)

ASSEMBLY HARDWARE

HARDWARE (attach cylinder to arm and chest)
71. Shaft collar 28-070-029

DUCT HOSE ASSEMBLY

72. Duct hose (arm cover) ADH 1502
73. Hardware (attach duct hose to arm) 28-057-044
Threaded rod
1/4-20 x 3 1/2"
74. Hardware (attach duct hose to arm) 28-090-329
1/4-20 nut
1/4 flatwasher
1/4 lockwasher

MITZI LEFT ARM ASSEMBLY

LEFT SHOULDER ASSEMBLY

10. Small K-hinge with bearings M12000
 11. Bushing only (old K-hinge) FB56-3
 12. Needle bearing only (new K-hinge) B56
 13. Collar pin (cylinder rear mount pin) 28-050-025
 14. Collar pin (Arm raise front mount) 28-050-015
 15. Hardware (collar pin) 28-090-308
 3/8-24 nut
 3/8 lockwasher
 16. Shaft collar (cylinder rear mount pin) 28-070-029
 17. Shoulder shaft block with bushing M09870
 18. Bushing only (shoulder shaft block) FB810-4
 19. Hardware (shoulder shaft block to K-hinges) 28-090-365
 1/4-20x2" bolt
 1/4-20 nut
 1/4 flatwasher
 1/4 lockwasher
 20. Shoulder shaft (small shoulder) M11800
 21. Actuation lever (small shoulder) M07380
 22. Set screw 8-32 x 1/4" 28-090-302
 23. Hardware (small shoulder) 28-045-972
 Cap screw
 #10 lockwasher
 24. Dowel pin (cylinder front mount) 28-055-087
 25. Roll pin (to pin act. lever) 28-060-045

ASSEMBLY HARDWARE

26. Hardware (attach left arm to chest) 28-090-309
 5/16-18x1 1/2" bolt
 5/16 lockwasher

UPPER LEFT ARM ASSEMBLY

27. Upper left arm with bearings M12035
 28. Needle bearing only B56
 29. Hardware (attach upper arm to shoulder) 28-090-311
 1/4-20x1 1/2" bolt
 1/4-20 nut
 1/4 flatwasher
 1/4 lockwasher

LOWER LEFT ARM ASSEMBLY

30. Lower left arm with bearings M12050
 31. Lower arm pivot bushing (old) FB56-3
 32. Lower arm lever bushing 28-032-035
 33. Needle bearing only B56

E-HINGE ASSEMBLY

34. E-hinge with bearings M09442
 35. Needle bearing only B56
 36. E-hinge pin (dowel pin) 28-055-130
 37. Load washer 28-085-125
 38. Retaining clip 28-055-205

SHOULDER CYLINDER ASSEMBLY

39. Cylinder only 28-015-040
 40. Rebuild kit 28-015-214
 41. Fitting 85-030-110
 42. Barb with O-ring 1000
 43. Gasket (fiber style) 2400
 44. Jam nut 28-040-227
 45. Rod end TRE-5
 46. Bushing for rear mount B68-4
 47. Spherical bearing for rear mount 28-015-280

ASSEMBLY HARDWARE

48. Dowel pin 28-055-180
 49. Retaining clip 28-055-205
 50. Load washer 28-085-125

LEFT ELBOW CYLINDER ASSEMBLY

51. Rebuild kit (brass cylinder) 28-010-210
52. Cylinder only D31796-A
53. Rebuild kit (Chicago cylinder) 28-012-040
54. Fitting 85-030-110
55. Barb with O-ring 1001
56. Gasket (fiber style) 2400
57. Jam nut 28-040-225
58. Clevis 28-040-025
59. Bushing (cyl. rear) B58-3

ASSEMBLY HARDWARE

HARDWARE (attach cylinder to upper and lower arm)
60. FAS-PIN (upper arm mount) 28-055-176
61. Set screw 8-32 x 1/4" 28-090-302
62. FAS-PIN (lower arm mount) 28-055-178

LEFT ARM RAISE CYLINDER ASSEMBLY

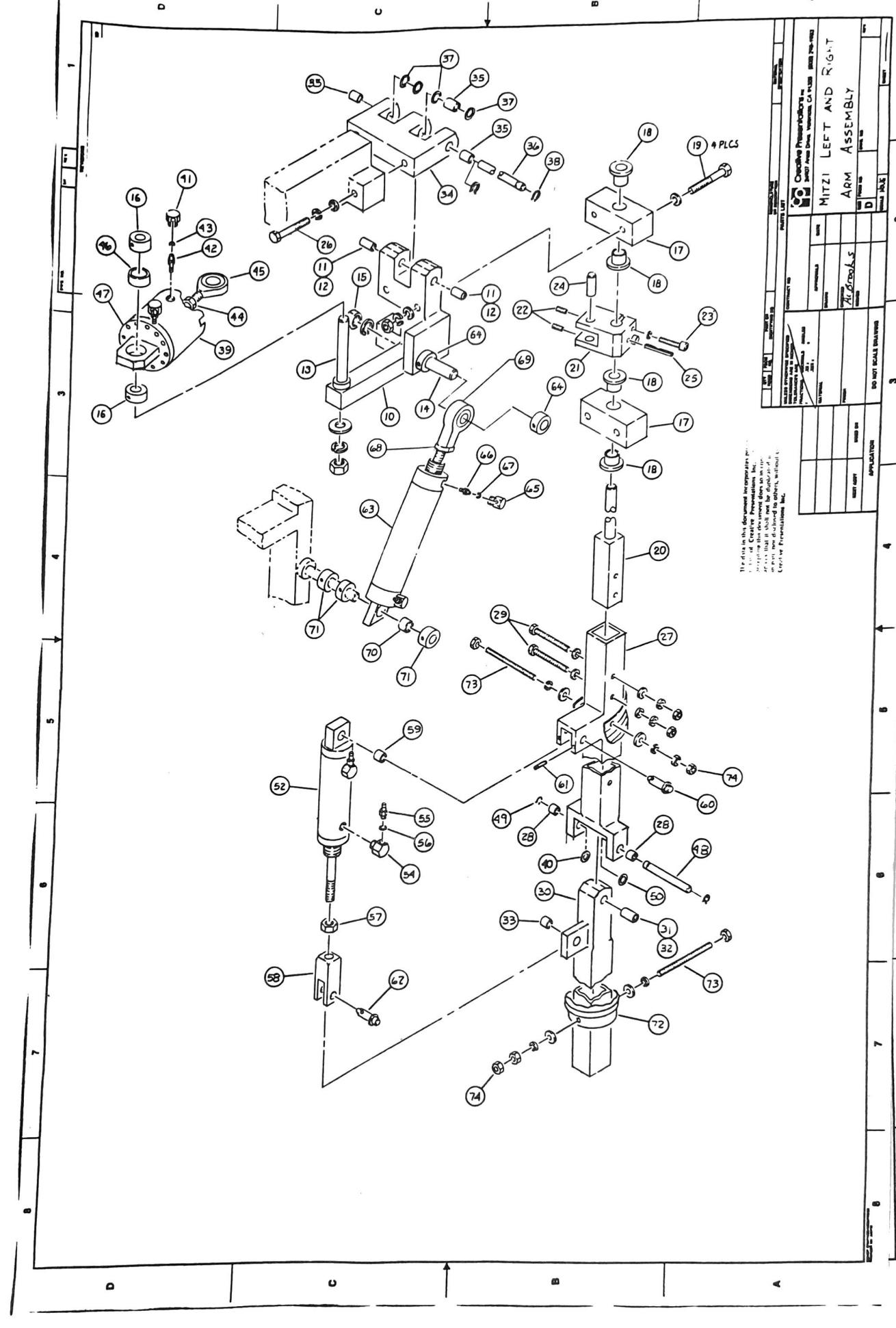
D31794-A
63. Cylinder only
64. Rebuild kit (Chicago cylinder) 28-012-040
85-030-110
65. Fitting 1001
66. Barb with O-ring 2400
67. Gasket (fiber style) 28-040-225
68. Jam nut M19810
69. Rod end B68-3
70. Bushing (cyl. rear)

ASSEMBLY HARDWARE

HARDWARE (attach arm raise cylinder to arm and chest)
71. Shaft collar 28-070-030

DUCT HOSE ASSEMBLY

72. Duct hose (arm cover) ADH 1502
73. Hardware (attach duct hose to arm) 28-057-044
Threaded rod
1/4-20 x 3 1/2"
74. Hardware (attach duct hose to arm) 28-090-329
1/4-20 nut
1/4 flatwasher
1/4 lockwasher



MITZI LEG ASSEMBLY

<u>LEG ASSEMBLY</u>	
10. Mitzi legs	
11. Spindle (body	M18020
turn shaft)	
12. Clamping collar	M11620
13. Pillow block bearing	28-070-074
14. Hardware (pillow	28-025-410
block to leg)	28-090-308
3/8-24x1 1/2" bolt	
3/8-24	nut
3/8	lockwasher
15. Body lean rear mount	M19827
16. Set screw	
1/4-20 x 1/4"	28-090-302
17. Body turn mount	
steel plate	M07740
18. Collar pin only	28-050-070
19. Hardware (attach	
collar pin to mount)	28-090-308
3/8-24 nut	
3/8	lockwasher

ASSEMBLY HARDWARE

20. Hardware (attach body	
turn mount to legs)	28-090-349
5/16-18x1 1/2" bolt	
5/16-18	nut
5/16	lockwasher

BODY TWIST CYLINDER ASSEMBLY

21. Cylinder only	28-015-070
22. Rebuild kit	28-015-210
23. Fitting	85-030-110
24. Barb with O-ring	1000
25. Gasket (fiber style)	2400
26. Jam nut	28-040-220
27. Rod end	TRE-5
28. Alignment bar	
(between cyl.)	M07270
29. Hardware (body	
twist cylinder)	28-090-317
10-24x5" screw	
10-24	nut
#10	flatwasher
#10	lockwasher

ASSEMBLY HARDWARE

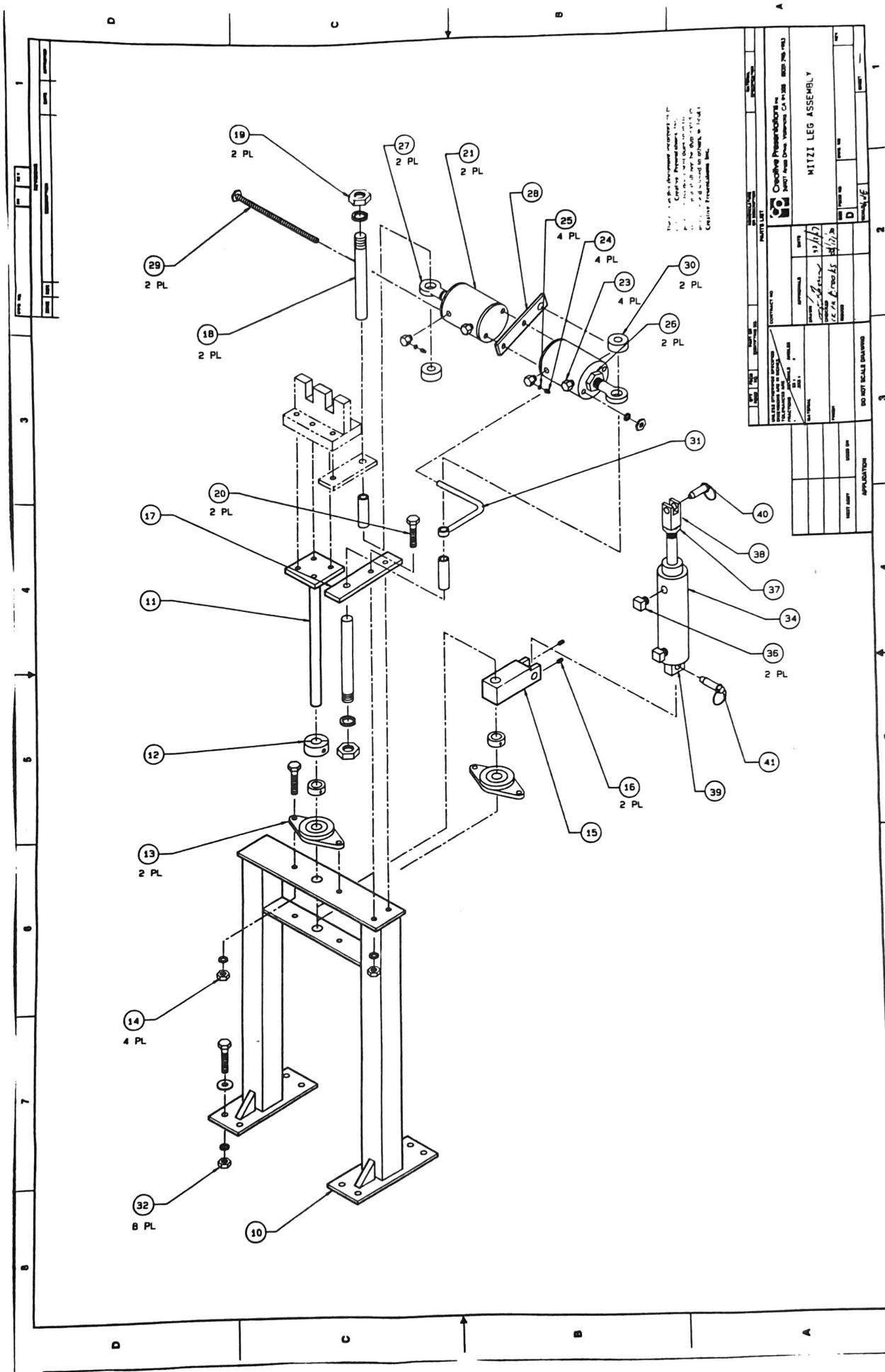
HARDWARE (attach cylinder	
to leg and chest)	
30. Shaft collar	28-070-029
31. Alignment rod (body	
twist cylinder)	M07790
32. Hardware (attach	
legs to floor)	28-090-323
3/8-16x1 1/2" bolt	
3/8-16	nut
3/8	flatwasher
3/8	lockwasher

BODY LEAN CYLINDER ASSEMBLY

33. Rebuild kit (brass	
cylinder)	28-010-265
34. Cylinder only	D31802-A
35. Rebuild kit (Chicago	
cylinder)	28-012-050
36. Fitting	85-020-031
37. Jam nut	28-040-245
38. Clevis	28-040-040
39. Bushing (cyl. rear)	
(Chicago only)	B810-4

ASSEMBLY HARDWARE

HARDWARE (attach cylinder	
to chest and legs)	
40. FAS-PIN (front mount)	28-055-182
41. FAS-PIN (rear mount)	28-055-184



MITZI AIR SUPPLY SYSTEM

<u>PLUMBING HARNESS ASSEMBLY</u>		
10. Hose 1/16" *		80-005-007
11. Hose (1/8") .125 *		80-005-010
12. Hose .170 purple *		80-015-015

<u>QUICK RELEASE ASSEMBLY</u>		
13. 24-hole plate		
plumbing harness side	M13000	
14. 24-hole plate		
valve bank side		M12950
FITTINGS:		
15. Barb 1/16" x 10-32		1000
16. Barb .125 x 10-32		1001
17. Barb .170 x 10-32		1503
18. Gasket (fiber style)		2400
19. O-ring (between plates)	28-045-955	
20. Hardware (attach quick release plates together)		28-090-311
1/4-20x1 1/2" bolt		
1/4-20	nut	
1/4	flatwasher	
1/4	lockwasher	

<u>FLOW CONTROL ASSEMBLY</u>		
21. Flow control valve	FC-32	
FITTINGS (barb size depends on		
flow control use)		
22. Barb 1/6" x 10-32		1000
23. Barb .125 x 10-32		1001
24. Barb .170 x 10-32		1503
25. Gasket (fiber style)		2400
HOSE (quick release to valve bank)		
26. Hose 1/16" clippard *	80-005-007	
27. Hose .125 clippard *	80-005-010	
28. Hose .170 purple *	80-015-015	

<u>VALVE BANK ASSEMBLY</u>		
29. Valve bank bracket		28-080-970
30. Hardware (attach		
bracket to valve bank)	28-090-318	
10-32x2 1/2" bolt		
10-32	nut	
#10	flatwasher	
#10	lockwasher	
FITTINGS (barb size depends		
on valve use)		
31. Barb .125 x 1/8" MPT	85-010-012	
32. Barb .170 x 1/8" MPT	85-010-014	
33. Plug 1/8"socket head	85-060-010	
34. Hose (valve bank to		
exhaust port manifold)		
(1/8") .125 clippard*	80-005-010	
35. Valve bank fitting		
3/8" push-lock		
	x 3/8" MPT	85-010-044
36. Hose (valve bank to muf-		
fler & intake T-fitting)		
3/8" push-lock *	80-020-029	
37. Exhaust pilot pressure		
manifold (12-port)	85-045-020	
FITTING (exhaust pilot		
pressure manifold)		
38. Barb .125 x 10-32	1001	
39. Plug screw		85-045-030
40. Gasket (fiber style)		2400
41. Barb 1/4" x 1/8" MPT		85-010-015
42. Hose (exhaust pilot		
pressure manifold		
to muffler)		
1/4" push-lock *	80-020-015	
43. Valve (single valve)		28-080-110
44. Lock ring		28-080-940
45. Valve repair		
Main spool kit		28-080-920
46. Seal repair kit		28-080-910
47. Gasket(between valves)		28-080-950
48. O-ring gasket		28-080-952
49. 4" threaded coupler		28-080-955
50. End plate set with		
cap screws		28-080-960

* Order hose by the foot

MITZI COSTUME & FIBERGLASS

HEAD ASSEMBLY

<u>HEAD ASSEMBLY</u>	
1. Ear (each) *	AE35 8401
2. Wig	AE33 52007
3. Mask complete *	AE31 9401
4. a. Tongue only	AF31 6612
Eyelashes	21-050-060

NECK ASSEMBLY

1. Dickey AE34 4818
2. Leather neck guard AF36 48002

CHEST ASSEMBLY

1. Sweater	AE33	2504
2. Latex breast plate	AE34	4208
3. Leather (backguard)	AE40	5905

SHOULDER ASSEMBLY

1. Leather (right shoulder guard) AE37 1004
2. Leather (left shoulder guard) AE37 504

HAND ASSEMBLY

1. Right hand
with pom-pom * AE32 9202
2. Left hand
with pom-pom * AE32 9302
3. Pom-pom only (each) AE32-5201

LEG ASSEMBLY

1. Skirt	AE33	2403
2. Left fur leg *	AE45	8702
3. Right fur leg *	AE45	8802
4. Right shoe	AE34	4619
5. Left shoe	AE34	4419

* IF STORE OPEN PRIOR TO
1/1/82, SPECIFY OLD-STYLE
FUR WHEN ORDERING.

HEAD

1. Skull - fiberglass AE56 019
HARDWARE (attach skull to head frame)
2. Threaded rod 1/4-20 x 2 1/8" 28-057-026
3. Threaded rod 1/4-20 x 2 3/8" 28-057-027
4. Hardware (att. skull to head frame) 28-090-329
1/4-20 nut
1/4 flatwasher
1/4 lockwasher

PIGTAIL MOUNT

5. Pigtail mount M19390
6. Hardware (attach pig-
tail mount to skull) 28-090-320
 1/4-20x1" bolt
 1/4-20 nut
 1/4 flatwasher
 1/4 lockwasher

BODY